
Pennsylvania Department of Education



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF EDUCATION
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Educational Technology Report

Thursday, November 06, 2008

Entity: Northern Lehigh SD

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Core Purpose

Mission

The mission of the Northern Lehigh School District community is to create a challenging and supportive environment dedicated to meeting the diverse educational needs of all learners.

Vision

Our learners will have:

- Creative and critical thinking skills necessary to be successful.
- Self-esteem, self-discipline and a sense of responsibility that enables them to meet challenges, be team players and respect others' differences.
- Communication, technical, and life skills to gather information, solve problems and adapt to change.
- An awareness of physical and psychological well-being.
- A vision for success.
- An appreciation for the arts and sciences.

Shared Values

We believe that ...

- *all students can learn and succeed if given sufficient time and appropriate instruction.*
- *students will master a core of knowledge based on academic standards.*
- *communication skills are essential to success.*
- *positive attitude, motivation, self-esteem and responsible behavior are vital to the learning process.*
- *all students should develop skills and appreciation in areas of interest beyond the core of basic knowledge.*
- *ongoing staff development is essential to quality learning.*
- *learning is a life-long process.*
- *the school, community, family and students all share in the responsibility for learning.*
- *students must be challenged to think critically, problem solve, and use appropriate decision-making skills.*
- *students must have a nurturing environment that is physically, emotionally, and spiritually safe.*
- *the appreciation of diversity is an integral part of a student's educational experiences.*

Needs Assessment

From research conducted by the U.S. Department of Education and Apple Computer, Inc., we know that schools generate impressive results for students, including improved achievement, higher test scores, improved student attitude, enthusiasm and engagement, richer classroom content, and improved student retention and job placement rates when technology is readily accessible to students. We also understand that student achievement is enhanced when teachers integrate technology into daily instructional practice. Of the hundreds of studies that show positive benefits from the use of technology, two are worth noting for their comprehensiveness. The first, a U.S. [Department of Education](#)-funded study of nine technology-rich schools,

concluded that the use of technology resulted in educational gains for all students regardless of age, race, parental income, or other characteristics. The second, a 10-year study supported by [Apple Computer, Inc.](#), concluded that students who are provided with technology-rich learning environments continued to perform well on standardized tests but were also developing a variety of competencies not usually measured. Students explored and represented information dynamically and in many forms; became socially aware and more confident; communicated effectively about complex processes; became independent learners and self-starters; knew their areas of expertise and shared that expertise spontaneously." (ACOT).

What we have acquired:

In an effort to provide our students with a technology-rich learning environment we have put in place Local Area Networks (LAN) within our four (4) school buildings and have connected the buildings via a robust fiber optic Wide Area Network (WAN). In turn, our district is connected to the Internet and Internet 2 via our local Intermediate Unit (CLIU #21) over a wide area fiber optic connection. These network connections allow us to provide video conferencing, video streaming, and other Internet-based and network-based services to our schools. These connections allow us to utilize research-based benchmark assessment products over the Internet such as AIMSweb, 4Sight, and Study Island which are academically correlated to the PSSA and which provide benchmark information to inform our Response to Intervention (RTI) initiative. They allow us to outsource our financial accounting system, student information system, and our data warehousing through an Application Service Provider (ASP) arrangement which relieves the burden on our small IT staff of maintaining, updating and backing up these systems and allows them more time to support academic services and needs.

Within our school buildings we have insured that every classroom has at least one computer and a printer which is student accessible. Within our high school (grades 9-12) we have five (5) computer labs consisting of twenty-five (25) student computers, a laser printer, teacher computer, a data projector, and classroom management software; a separate Computer Aided Design (CAD) lab of eighteen (18) student and one (1) teacher computer; and at least two (2) student computers per classroom, although some classrooms have up to four (4) computers. There are separate computers for teachers in each classroom and five (5) faculty preparation areas, each having two (2) computers and a printer in them. We've recently begun placing data projectors and interactive whiteboards in our high school mathematics and science classrooms. Through a generous donation from the Northern Lehigh Educational Foundation, Northern Lehigh School District has purchased five (5) laptop carts of thirty (30) laptops each, as well as interactive graphics tablets that tie in with the interactive whiteboard and a classroom response system for our five (5) science classrooms. The library/research media center, outfitted with eighteen (18) computers and a color laser printer, is a place where students can search our online card catalog, use word processing, spreadsheet, database, and presentation software applications or search the Internet.

In our middle school (grades 7-8) we have two (2) technology education labs consisting of twenty (20) and twenty four (24) computers respectively with a teacher workstation along with classroom management software and a color laser printer in each lab. The lab with twenty four (24) computers also has a data projector. The Library has twenty six (26) student workstations, a mounted data projector, classroom management software and a color laser printer. Each classroom has at least two (2) and as many as four (4) student computers and a printer. Most teachers in this building have their own personal workstation and additionally there are two (2) faculty prep rooms which contain two (2) computers and a laser printer for their use.

Slatington Elementary School (grades 3-6) has two computers labs of twenty six (26) student computers each plus a teacher's workstation, classroom management software, laser printers and interactive whiteboards. In this school there is at least one student computer in each classroom and most teachers have their own workstations. The library is outfitted with fourteen (14) computers, a color laser printer, a large projection screen and a data projector. This building

is also outfitted with three (3) mobile wireless laptop carts that are shared among classrooms. Our other elementary school, Peters Elementary School, (grade pre-K — 2) has a computer lab consisting of twenty four (24) student computers plus a teacher's workstation, classroom management software, a data projector, and a laser printer. Each classroom within the school has at least one student accessible computer and printer and some, but not all, teachers have their own workstation. The library is equipped with eight (8) computer workstations along with a color laser printer.

What we have accomplished:

Since our last Technology Plan in 2006 we have met or partially met the following goals:

Goal 1: Provide technology tools in every classroom at the point of instruction:

All computers in our classrooms have been refreshed since our last technology plan and two new computer labs, one in the high school and one in Slatington Elementary School, have been installed. We are in the process of installing five (5) new laptop carts and interactive whiteboards in the high school science classrooms and interactive whiteboards in each of our mathematics classrooms. We are implementing three (3) mobile wireless computer labs in our Slatington Elementary School to be shared among the classrooms. We have installed wireless networking capabilities in three of our four schools with plans to install it in the Peters Elementary building later this school year. We do not have presentation technology available in each and every classroom at present, but we do have shared data projectors, shared laptops and classroom response systems available in every school building to be shared among the classrooms that do not have this equipment available.

Goal 2: Investigate the use of curriculum management, instructional management and integrated learning systems software to enhance classroom instruction:

We have implemented classroom management software in all of our computer labs and in the high school and middle school libraries. This software has given our teachers the ability to enhance classroom presentations, allow one on one interaction with students, control access to the Internet, and generally keep students on task in a computer lab setting. At this point in time we are still experimenting with instructional management software such as Moodle and eSchool Builder to enhance our classroom offerings. Professional development opportunities to help teachers to integrate these technologies into their instructional practice are currently offered by our local intermediate unit, CLIU 21. We have researched various curriculum management and integrated learning systems software, but are unable to find the necessary funds to acquire and implement these systems at this time.

Goals 3: Use technology to augment learning opportunities for all students:

In the area of distance learning we still are not utilizing our video conferencing capabilities anywhere near their potential. We are however augmenting student learning opportunities via on-line courses from other schools and colleges (dual enrollment) and video streaming is being used regularly in the elementary and middle schools. We are using software products such as Study Island to help prepare our student for success in the PSSA tests and benchmark assessments such as AIMSweb and 4Sight in our RTI endeavors to raise student reading and math skills to on-level.

Goal 4: Provide for the integration of the community at large with the school community through use of technology:

Since our last plan we have implemented Parent Access provided by our student information system which allows parents to see their student's assignments and grades and attendance

information. This is available to the parents of our students in grades 3 through 12. We have also implemented an automated mass calling system for emergency situations, general outreach messages, and parent surveys. We have redesigned and updated our district web site to make it easier to navigate and try to keep the information contained on the site up to date and relevant. The web site contains all school board information such as the names and photos of the members, their e-mail addresses, and school board agendas, minutes, and meeting information. On our web site, we also post announcements and information which are of general interest to our community and stakeholders. The high school and middle school web sites have been totally redesigned and provide extensive information about departments, programs and activities at those schools. Our elementary school web sites are also updated on a regular basis; 96% of the teacher at Peters and Slatington Elementary Schools, have created their own web page to keep parents informed about what is going on in their classroom.

Goal 5: Offer opportunities for the community members at large to develop and/or enhance their technology skills:

We had been offering computer skills classes to the general public such as beginning and intermediated Microsoft Word, beginning and intermediate Microsoft Excel, beginning Microsoft Access, beginning Microsoft Powerpoint, Microsoft Windows XP, and a beginning Internet class. Unfortunately, we didn't have enough volunteer instructors and the classes haven't been offered for a while. There is however a renewed push to find volunteer instructors to begin offering these classes once again this school year.

Goals for our New Technology Plan:

Along with trying to complete any unfinished goals from our last Technology Plan, where economically feasible, we are setting goals to use technology to help our students reach higher levels of achievement academically, facilitate communications with our parents/guardians, community stakeholders and among administration, faculty and students, and managing our technology by planning for its eventual replacement with an eye on energy efficiency and its over all ability to meet the needs of administration, faculty, and students.

In the area of academic achievement, we will be looking to continue to use existing software and to acquire new software which will enable us to assess student progress toward meeting AYP goals established by NCLB. We will also be looking at how we can continue to create a technology-rich learning environment for our students through the replacement of older technology and the acquisition of newer technologies that are shown to help students reach higher achievement levels. We will also consider whether we are going to adopt a 1:1 computing environment, if it makes sense for us, or maybe some hybrid environment, depending on which is more sustainable. We will develop standards of technology proficiency that need to be attained by all faculty so that they will integrate technology into their classrooms everyday in order to provide an even more technology-rich environment for our students.

The next focus of our Technology Plan is communications, communications with our Parents/Guardians, our community, our administration, our faculty and our students. Starting with communication with our Parents/Guardians we are currently using PowerSchool:Parent to allow parents to see what their child's assignments and grades are, as well as attendance information for grades 3 - 12. System statistics show us that between 54% -56% of our parents/guardians are accessing this information via PowerSchool:Parent. We will continue to require faculty to put as much information into their electronic gradebooks as possible and to update them faithfully so that parents/guardians have the latest most up to date information available on their student. Along with this we are encouraging all faculty to have a personal web page and keep it updated often so there is a place where parents/guardians can go to see what is being taught in the classroom as well as find resources that may provide additional help to their student outside the classroom. We are going to be using our parent contact system, Connect-ED, to provide

automated attendance calling to parents/guardians, making them aware of student absences immediately and freeing our health room staff of the tedious job of calling parents/guardians in order that they may work on health-related issues instead.

We will be building out sections of our district web site to provide our community with more information about our district and the resources that are available to the community at large and to our students in particular. We will continue to post events and information that are of interest to the community as well as our school board agendas, minutes, and meeting announcements. We are also planning to use our technology capabilities to cut down on the amount of paper used in the district by utilizing our GroupWise system to provide commonly used forms, documents, and other publications of interest to our faculty and staff rather than making numerous copies and distributing them. We will post common forms and instructions on our web site that are required by the community, including such documents as kindergarten registration forms, requests for information forms, etc.

The last goal area our plan covers is managing our technology resources by planning for its eventual replacement before it becomes obsolete. We will develop a plan to help us evaluate the energy consumption of all our technology especially our telecommunications infrastructure and our network servers. By doing this we can plan to replace older outdated equipment with more energy efficient equipment when the time comes for it to be replaced, thereby saving the district money on energy consumption, especially in light of the electricity rate caps coming off in the near future. We will also educate faculty and staff about the small things they can do like shutting off their computers and printers and looking for and shutting off devices that are energy vampires to save energy and in the process save money. Another project we'd like to undertake is reconfiguring our current main telecommunications room to give us space for future expansion and to be ready for the next generation of servers and telecommunications equipment.

Maintaining the level of technology we already have while expanding in other areas such as data projectors, interactive whiteboards, classroom performance systems, applications software, on-line software subscriptions is going to be very challenging over the next three (3) years in light of Act 1 and the current economic climate in this country. The questions that remain to be answered are: Will there be enough revenue available for the state to be able to offer grant programs such as Classrooms for the Future? Will e-rate funding be much smaller and discounts cut? Will there be funds available through corporations and private individuals to support our educational foundation and its work? Will the district have to cut staff or even programs to make ends meet because of the economy and because of the removal of electric rate caps? These things will have an impact on what goals our school district will accomplish during the length of this Technology Plan, especially if those goals require the expenditure of funds above what we are currently expending.

Goals and Strategies

Goal: ACADEMIC PROFICIENCY

Description: As measured by the PSSA, PASA, and/or District assessments, students will be proficient in the core subject areas of reading, math, science, and social studies, so the District can meet Adequate Yearly Progress (AYP) each year for all students leading to successful academic transitions from elementary, to middle to high school and beyond.

Strategy: SCHOOL CLIMATE

Description: A positive school climate is conducive to effective teaching and academic performance. School personnel will be encouraged to increase their mental, physical, and emotional wellness in order to enhance their own health, which will be reflected through increased student performance.

Activities:

Activity	Description	
CAT Committees	Create Curriculum and Technology Committees in each school for the purpose of assessing technology needs and making recommendations to the Technology Department or to the Director of Curriculum and Instruction.	
Person Responsible	Timeline for Implementation	Resources
Director of Technology, Director of Curriculum and Instruction, and Principals	Ongoing	\$0.00

Goal: TECHNOLOGY UTILIZATION

Description: All students and staff will utilize technology as a means to achieve academic proficiency and increase operational efficiencies.

Strategy: ACADEMIC ACHIEVEMENT

Description: Teachers will utilize instructional strategies that integrate technology into the classroom and data from instructional/benchmarking software/web applications to demonstrate improved student achievement.

Activities:

Activity	Description	
Benchmark Assessments	Purchase and administer on-line research-based benchmark assessments that are highly correlated to the PSSA, such as AIMSweb, 4Sight, and Study Island.	
Person Responsible	Timeline for Implementation	Resources
Director of Curriculum and Instruction	Ongoing	\$106,500.00

Activity	Description	
Educational Technology Replacement and Acquisition Plan	Develop a plan for replacing out dated technology and acquiring new technology such as interactive white boards, PDAs, mobile labs, and laptops for teachers and students, as well as subscriptions to content-specific, interactive web applications.	
Person Responsible	Timeline for Implementation	Resources
Director of Technology and Superintendent	Start: 1/5/2009 Finish: 6/30/2009	\$500,000.00

Activity	Description	
Proficiency Standard for Teachers	Develop a standard of expectation for teachers in using technology for communication, organization, and instruction.	
Person Responsible	Timeline for Implementation	Resources
Director of Technology, Director of Curriculum and Instruction,	Start: 5/22/2009 Finish: 6/30/2010	\$0.00

Superintendent		
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Strategy: COMMUNICATIONS

Description: To enhance electronic communications with all members of the Northern Lehigh School District Community.

Activities:

Activity	Description	
District Web Site	Create a content-rich web site, with all departments contributing information.	
Person Responsible	Timeline for Implementation	Resources
Administrative Team	Ongoing	\$21,000.00

Activity	Description	
Facilitate Attendance Communications with Parents/Guardians	Implement automated attendance calling of Parents/Guardians utilizing the Connect-ED school to parent contact system.	
Person Responsible	Timeline for Implementation	Resources
Principals	Ongoing	\$0.00

Activity	Description	
Paperless System	Forms, documents, and publications will be available for use on the intranet or internet as applicable.	
Person Responsible	Timeline for Implementation	Resources
Director of Curriculum and Instruction and Director of Technology and Technology Coordinator	Ongoing	\$3,500.00

Activity	Description	
PowerGrade	Maintain PowerGrade in High School, Middle School, and Slatington Elementary School and extend it to Peters Elementary to provide parents with daily internet access to student progress.	
Person Responsible	Timeline for Implementation	Resources
Technology Coordinator	Ongoing	\$8,500.00

Strategy: MANAGEMENT

Description: Monitor, maintain and evaluate the district information systems for security, cost effectiveness, and functionality.

Activities:

Activity	Description	
Evaluating our current information systems	Survey end users on the functionality and usefulness of our current information systems, including but not limited to financial accounting, student information system, data warehousing, etc.	
Person Responsible	Timeline for Implementation	Resources
Director of Technology	Ongoing	\$0.00

Activity	Description	
Information Systems Infrastructure	Monitor and evaluate the energy consumption by the district's Information System's infrastructure in order to make appropriate recommendations for any necessary changes.	
Person Responsible	Timeline for Implementation	Resources
Technology Department	Ongoing	\$0.00

Activity	Description	
Infrastructure and Administrative Technology replacement and acquisition plan	Plan for the eventual replacement or upgrade of our network infrastructure, wide area network, servers, administrative computers and laptops, and any additional technology acquisitions that may be needed in the future.	
Person Responsible	Timeline for Implementation	Resources
Technology Department	Ongoing	\$0.00

Activity	Description	
Reconfigure our current main telecommunications room	Plan for enlarging, reorganizing, and securing the current telecommunications room to maximize the operating efficiency of this space.	
Person Responsible	Timeline for Implementation	Resources
Technology Department	Ongoing	\$6,000.00

Activity	Description	
Research and evaluate IT energy consumption	Research and evaluate the energy consumption of our telecommunication rooms and classroom technology in order to find ways to reduce our consumption.	
Person Responsible	Timeline for Implementation	Resources
Director of Technology, Director of Support Services and Superintendent	Ongoing	\$0.00

Staff Development

The district will be providing professional development opportunities to all faculty with regard to integrating technology into routine classroom instructional practice. This will be done with both in-house professional development, provided by staff members who are leaders in using technology in the classroom, and outside professional development provided by our local IU (CLIU #21) or surrounding intermediate units which ever is appropriate. Faculty will also be attending conferences such as High Schools That Work (HSTW), PETE&C, and others to learn about the latest in best practices from their peers. When new technology hardware/software is purchased, we will contract with trainers to provide hands-on training on equipment such as interactive whiteboards, etc. Our Technology department will also conduct trainings on in-service days and at faculty meetings on various topics depending on the needs of the faculty. Our local IU (CLIU 21) also offers many professional development opportunities throughout the school year and Summer Academies over the summer months. In our area the community college (LCCC) offers professional development for teachers as well as the local four-year colleges that offer teaching degrees and certificates.

At the beginning of each school year we offer professional development opportunities on PowerGrade , the electronic grade book software we use in conjunction with our SIS, and basic training on utilizing our network, e-mail, personal web page creation, CPE tracker, NetTrekker, etc. Professional development is always a component that is provided whenever we add new technology to our classrooms and schools or implement new systems such as a student information system.

Since one of our goals is to set standards of technology proficiency for faculty we will also be evaluating them against these standards and using that information to drive our professional development for technology.

The district will also provide technology training and professional development to our administration and staff on various software and hardware that is required for them to perform their job duties on an as needed basis either during regularly scheduled teacher in-service days or during the summer months.

Budget

Summary: Potential Funding Distribution

Funding Source	2009-2010	2010-2011	2011-2012	Total
010 - ADMINISTRATIVE BUDGET	\$111,000.00	\$193,500.00	\$264,500.00	\$569,000.00
208 - Staff And Program Development	\$10,000.00	\$6,000.00	\$0.00	\$16,000.00
390 - EXTRA GRANTS	\$17,000.00	\$17,000.00	\$17,000.00	\$51,000.00
TOTAL	\$138,000.00	\$216,500.00	\$281,500.00	\$636,000.00

Goal: TECHNOLOGY UTILIZATION

All students and staff will utilize technology as a means to achieve academic proficiency and increase operational efficiencies.

ACADEMIC ACHIEVEMENT	2009-2010	2010-2011	2011-2012	Total	Funding Source
Benchmark Assessments	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00	010 - ADMINISTRATIVE BUDGET

Benchmark Assessments	\$8,500.00	\$8,500.00	\$8,500.00	\$25,500.00	010 - ADMINISTRATIVE BUDGET (Secondary)
Benchmark Assessments	\$17,000.00	\$17,000.00	\$17,000.00	\$51,000.00	390 - EXTRA GRANTS
Educational Technology Replacement and Acquisition Plan	\$43,000.00	\$85,000.00	\$122,000.00	\$250,000.00	010 - ADMINISTRATIVE BUDGET
Educational Technology Replacement and Acquisition Plan	\$43,000.00	\$85,000.00	\$122,000.00	\$250,000.00	010 - ADMINISTRATIVE BUDGET (Secondary)

COMMUNICATIONS	2009-2010	2010-2011	2011-2012	Total	Funding Source
District Web Site	\$2,000.00	\$2,000.00	\$0.00	\$4,000.00	010 - ADMINISTRATIVE BUDGET
District Web Site	\$5,000.00	\$5,000.00	\$0.00	\$10,000.00	208 - Staff And Program Development
Paperless System	\$1,000.00	\$500.00	\$0.00	\$1,500.00	010 - ADMINISTRATIVE BUDGET
PowerGrade	\$1,500.00	\$500.00	\$0.00	\$2,000.00	010 - ADMINISTRATIVE BUDGET
PowerGrade	\$5,000.00	\$1,000.00	\$0.00	\$6,000.00	208 - Staff And Program Development

MANAGEMENT	2009-2010	2010-2011	2011-2012	Total	Funding Source
Reconfigure our current main telecommunications room	\$1,000.00	\$1,000.00	\$1,000.00	\$3,000.00	010 - ADMINISTRATIVE BUDGET
Reconfigure our current main telecommunications room	\$1,000.00	\$1,000.00	\$1,000.00	\$3,000.00	010 - ADMINISTRATIVE BUDGET (Secondary)

TOTAL	\$138,000.00	\$216,500.00	\$281,500.00	\$636,000.00	
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GRAND TOTAL	\$138,000.00	\$216,500.00	\$281,500.00	\$636,000.00	
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Monitoring

The Technology/Building and Grounds Committee of the School Board, consisting of School Board members, the Superintendent, Director of Technology, Technology Coordinator, Director of

Support Services, Director of Curriculum and Instruction, teachers, and community members, will evaluate the Technology Plan at least annually. The Administrative Team, which the Superintendent chairs, will also be responsible for monitoring the plan. The Director of Technology and/or his designee will meet with the Principals at least semi-annually to discuss the progress of the plan and any changes that need to be implemented. School technology committees for each school will be created consisting of the school Principal, teachers and students that will meet monthly to discuss the plan and technology issues affecting the school. This committee will serve as a monitoring tool for the Technology Department. We will also use surveys, meetings with stakeholders, and other tools such as PATI and on-line surveys to help us measure the effectiveness of the Technology Plan.

Evaluation

Given the rapid changes that are occurring related to technology we will need to continually review and make adjustments to our Technology Plan. The Director of Technology along with the Director of Curriculum and Instruction will be responsible for ensuring that the approved Technology Plan is implemented. We will gather data from on-line surveys of our students, teachers and administrators; face to face meetings with these constituents; the number of hours of technology-related professional development logged; and student testing and assessment results to evaluate the effectiveness of our Plan. Using this data we will make any adjustments or corrections to the Plan as necessary. The Director of Technology and/or his designee will meet with building technology committees monthly to review goals, accomplishments and monitor progress. Additionally, these goals and accomplishments will be reviewed at regularly held Administrative Team meetings. Reports related to the goals and accomplishments of the Plan will be shared with the School Board members through the Technology/Building and Grounds Committee and input from them will be used to make adjustments and improvements to the Plan. We will also communicate the approved Plan to the community and make annual reports regarding progress and effectiveness of the Plan via our web site and district newsletter.